

AMENDMENTS TO THE CLAIMS

1-28. (Cancelled)

29. (Currently Amended) An optical disk apparatus for recording or reproducing information on or from an optical disk which has a transparent planar disk base member, a recording layer formed on the disk base member, and a reflecting layer for reflecting a laser beam by way of the disk base member, the reflecting layer being disposed on an opposite side of the disk base member than the recording layer, and the optical disk being configured such that an interval between the recording layer and the reflecting layer is longer than a wavelength of the laser beam, said optical disk apparatus comprising:

a light source which irradiates the laser beam for recording or reproducing the information on or from the optical disk, wherein said light source irradiates the laser beam onto the recording layer of the optical disk by way of the disk base member to form a focusing spot on the recording layer;

a photo detector which receives from the reflecting layer a reflected beam of the laser beam irradiated from said light source; ~~and~~

a tilt detecting unit which detects tilt of the optical disk by using an output from said ~~photo-detector.~~ detector;

a beam splitter which splits the reflected beam and the laser beam incident onto the optical disk such that the reflected beam and the laser beam incident onto the optical disk propagate along different optical paths from each other;

an objective lens which focuses the laser beam split by the beam splitter onto the recording layer of the optical disk;

an objective lens actuator which moves the objective lens to focus the laser beam onto the recording layer of the optical disk;

an aberration canceling unit which is disposed on an optical path for guiding the reflected beam to the photo detector to cancel a defocus aberration and a spherical aberration of the reflected beam split by the beam splitter, and

wherein the aberration canceling unit includes a condenser lens which focuses the reflected beam on the photo detector and a condenser lens actuator which moves the condenser lens to cancel the aberration of the reflected beam.

30. (Previously Presented) The optical disk apparatus according to claim 29, wherein the recording layer is formed closer to an incident surface of the optical disk where the laser beam is incident than the reflecting layer.

31. (Cancelled)

32. (Currently Amended) The optical disk apparatus according to claim 29, ~~claim 31~~, wherein said aberration canceling unit ~~means~~ includes a wavefront controlling device which controls a wavefront of the reflected beam.

33-56. (Cancelled)

57. (Previously Presented) The optical disk apparatus of claim 29, wherein said light source irradiates the laser beam such that the laser beam is incident on the recording layer.

58. (Previously Presented) The optical disk apparatus of claim 29, wherein said photo detector generates the output based on the reflected beam.

59. (Previously Presented) The optical disk apparatus of claim 29, wherein said optical disk apparatus is operable to detect tilt of the optical disk based on a length of an optical path of the laser beam.

60. (New) The optical disk apparatus of claim 29, wherein said beam splitter is disposed upstream of said aberration canceling unit along the optical path of the reflected beam such that movement of the condenser lens actuator does not affect the laser beam incident on the optical disk.

61. (New) An optical disk comprising:

- a transparent planar disk base member;

- a recording layer formed on the disk base member; and

- a reflecting layer which reflects an incident laser beam by way of the disk base member,

- wherein the reflecting layer is formed at a position opposing the disk base member with respect to the recording layer, and

- wherein a gap between the recording layer and the reflecting layer is set larger than a wavelength of the laser beam.

62. (New) The optical disk according to claim 61, wherein the recording layer is made of a photoisomerizing material having a property that two-photon absorption occurs by irradiation of the laser beam.

63. (New) A system comprising an optical disk and an optical disk apparatus for recording or reproducing information on or from the optical disk,

wherein the optical disk has a transparent planar disk base member, a recording layer formed on the disk base member, and a reflecting layer for reflecting a laser beam by way of the disk base member, the reflecting layer being disposed on an opposite side of the disk base member than the recording layer, and the optical disk being configured such that an interval between the recording layer and the reflecting layer is longer than a wavelength of the laser beam, and

wherein said optical disk apparatus comprises:

(i) a light source which irradiates the laser beam for recording or reproducing the information on or from the optical disk, wherein said light source irradiates the laser beam onto the recording layer of the optical disk by way of the disk base member to form a focusing spot on the recording layer;

(ii) a photo detector which receives from the reflecting layer a reflected beam of the laser beam irradiated from said light source;

(iii) a tilt detecting unit which detects tilt of the optical disk by using an output from said photo detector;

(iv) a beam splitter which splits the reflected beam and the laser beam incident onto the optical disk such that the reflected beam and the laser beam incident onto the optical disk propagate along different optical paths from each other;

(v) an objective lens which focuses the laser beam split by the beam splitter onto the recording layer of the optical disk;

(vi) an objective lens actuator which moves the objective lens to focus the laser beam onto the recording layer of the optical disk; and

(vii) an aberration canceling unit which is disposed on an optical path for guiding the reflected beam to the photo detector to cancel a defocus aberration and a spherical aberration of the reflected beam split by the beam splitter, the aberration canceling unit including a condenser lens which focuses the reflected beam on the photo detector and a condenser lens actuator which moves the condenser lens to cancel the aberration of the reflected beam.

64. (New) The optical disk apparatus according to claim 63, wherein the recording layer is formed closer to an incident surface of the optical disk where the laser beam is incident than the reflecting layer.

65. (New) The optical disk apparatus according to claim 63, wherein said aberration canceling unit includes a wavefront controlling device which controls a wavefront of the reflected beam.

66. (New) The optical disk apparatus of claim 63, wherein said light source irradiates the laser beam such that the laser beam is incident on the recording layer.

67. (New) The optical disk apparatus of claim 63, wherein said photo detector generates the output based on the reflected beam.

68. (New) The optical disk apparatus of claim 63, wherein said optical disk apparatus is operable to detect tilt of the optical disk based on a length of an optical path of the laser beam.

69. (New) The optical disk apparatus of claim 63, wherein said beam splitter is disposed upstream of said aberration canceling unit along the optical path of the reflected beam such that movement of the condenser lens actuator does not affect the laser beam incident on the optical disk.

70. (New) The optical disk according to claim 63, wherein the recording layer is made of a photoisomerizing material having a property that two-photon absorption occurs by irradiation of the laser beam.